National Vocational & Technical Training Commission

Institute of Electrical, Electronics & Computer Engineering,
University of the Punjab, Lahore

Artificial Intelligence C1 & C2

Assignment 1: 08/08/2023
Module 6: Database

Submission Requirements: Please upload your codes in PDF File on Google Classroom in the relevant Assignment section.

Note: Plagiarism is a serious violation. Zero marks will be awarded in case plagiarism is found.

Update Statements:

1. Update the 'students' table to set the 'studentName' of the student with 'id' 5 to 'Sara'.
2. Increase the 'price' of all items in the 'inventory' table by 10%.

Delete and Truncate Statements:

1. Delete all records from the 'products' table where the 'pStatus' is 'Inactive'.

2. Use the TRUNCATE statement to clear the 'inventory' table.

Where and In Clauses:

1. Retrieve the names of students from the 'students' table whose ages are either 18, 19, or 20.
2. Fetch the 'pName' and 'price' of products from the 'products' table where the 'pStatus' is 'Active'.

Between Clause:

1. Retrieve the names of students from the 'students' table whose ages are between 25 and 30.
2. Get the list of products from the 'inventory' table that have a 'price' between $5 and $15.

Is Null and Not Null:

1. Find the emails of students from the 'students' table who haven't provided an email address.
2. Retrieve the 'pName' of products from the 'products' table that have a null 'barcode'.

Unique and Auto_Increment:

1. Design a table named 'orders' with an auto-increment 'order_id' as a primary key.
2. Modify the 'barcode' column in the 'products' table to ensure it's unique and not nullable.

Aggregate Functions:

1. Calculate the average 'age' of students in the 'students' table.
2. Find the sum of 'bill' values for items purchased on '2023:08:08' in the 'inventory' table.

Distinct, Count, and Min-Max:

1. Retrieve the distinct 'pStatus' values from the 'products' table.
2. Count the number of female students in the 'students' table.
3. Determine the minimum and maximum 'marks' achieved by students in the 'studentResults' table.

Insert Statements:

1. Insert a new student with 'studentName' 'John', 'age' 22, and 'gender' 'M' into the 'students' table.
2. Add a new product named 'Pen' with 'price' $1.50 to the 'products' table.

Create and Drop Table:

1. Create a table named 'customers' with columns 'customer_id', 'customer_name', and 'email'.
2. Drop the table 'orders' from the database.

Select and Like with Wildcards:

1. Retrieve the names and email addresses of students from the 'students' table whose email addresses end with '@gmail.com'.
2. Get the names of all products from the 'products' table that have 'pName' starting with the letter 'A'.

Alias:

1. Write an SQL query to retrieve the 'studentName' as 'Name' and 'age' as 'Age' from the 'students' table.

2. Get the sum of 'bill' for each distinct 'date' from the 'inventory' table, labeling the sum as 'Total Bill'.